

#### NIOSH eNews Web page

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### From the Director's Desk

NIOSH Cincinnati: Yesterday, Today, and

Tomorrow.

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Information on monitoring and treatment programs, resources for health professionals provided.

# Benefits of Natural Compounds in Fighting Cancer Studied

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#### From the Director's Desk

Roots are important, as the late Alex Haley once reminded us. NIOSH's roots are embedded in decades of accomplishments, including the legacy of predecessor bureaus and offices whose responsibilities were transferred to NIOSH in 1971 under the Occupational Safety and Health Act.

Recent events have spotlighted the heritage of NIOSH's Morgantown, Pittsburgh, and Spokane laboratories in mining safety and health research; some of that history dates back nearly a century. In this year of celebrating NIOSH's 35th anniversary, we should also note the occupational health contributions of our laboratories in Cincinnati.

NIOSH's Cincinnati family tree is planted in rich soil. It has been part of the local landscape since the 1850s, when the federal government established a U.S. Marine Hospital for river workers in the downtown area. The Marine Hospital Service was the predecessor of the Public Health Service, of which NIOSH is a part. Its mission in Cincinnati, in tending to the health of the boatmen who plied America's commerce on the Ohio River, was a clear forerunner of our occupational safety and health charge.

The Ohio was also a main artery of America's booming industrial economy after World War II. Keeping pace with stakeholder needs, the Public Health Service dedicated the Robert A. Taft Sanitary Engineering Center in 1954, named for the nationally respected Senator from Ohio. President Eisenhower hailed the opening of this pioneering occupational and environmental health laboratory as a milestone "of special importance to every worker." In 1962, the Public Health Service also began leasing space in a second facility on Ridge Road, now known as the Alice Hamilton Laboratory. After its creation in 1971, NIOSH occupied the Taft and Hamilton facilities, sharing space for a time with other agencies. Eventually, both became NIOSH laboratories exclusively.

The dedicated scientists and engineers in the Cincinnati laboratories have produced many of NIOSH's signal achievements. For example, many tools and techniques routinely used today across the U.S. to prevent work-related illnesses, from analytical, exposure assessment, and epidemiologic methods to risk assessment principles and engineering solutions, were developed or significantly enhanced in Cincinnati. Thanks in substantial measure to our research in Cincinnati, scientists and policymakers have been better able to address the complex, emerging health issues of the modern economy. These include indoor environmental quality, emergency preparedness, workstation design, work-related stress, nanotechnology, and lingering concerns about past occupational exposures in Cold War nuclear weapons plants. Cincinnati is a hub of NIOSH's customer outreach services. In our activities over the years, we have formed close professional and personal ties in the local community.

Under the National Occupational Research Agenda (NORA) and r2p, the laboratories continue to promote collaborative, results-oriented research. Recent accomplishments include these:

- Co-authoring an incisive review of ethical and scientific issues associated with nanotechnology in the
  workplace. The article is published in the National Institute of Environmental Health Sciences' peerreviewed journal, *Environmental Health Perspectives*, on line at <a href="http://www.ehponline.org/docs/2006/9456/abstract.html">http://www.ehponline.org/docs/2006/9456/abstract.html</a>.
- Collaborating with local and federal partners, including the University of Cincinnati, Ohio University, and Ohio State University, on a major conference to be held in Cincinnati in December 2006. The conference will further the national and global dialogue on the occupational safety and health implications of nanotechnology: <a href="http://www.uc.edu/noehs/">http://www.uc.edu/noehs/</a>.

- Gathering and assessing new field data to determine how bacteria and fungi may flow through ventilation systems on commercial aircraft, and to estimate when potential exposures to flight crews may be greatest. Findings are expected to be reported in the near future. The study is part of strategic health research that NIOSH is conducting with airline operators and employees: <a href="http://www.cdc.gov/niosh/topics/flightcrew">http://www.cdc.gov/niosh/topics/flightcrew</a>.
- Working with industry and state partners in the growing truck-bed liner industry to identify effective
  ways to control respiratory exposures to MDI, an agent associated with potential for severe asthma
  symptoms, in liner-spraying operations. These efforts, which included the development of an exhaust
  system that was found to reduce exposures by up to 75 percent, underpin the findings and
  recommendations in a new NIOSH Alert: <a href="http://www.cdc.gov/niosh/docs/2006-149/">http://www.cdc.gov/niosh/docs/2006-149/</a>.

As you may know, we are working with CDC and the General Services Administration in early stages of planning for a consolidated Cincinnati facility. In this, we are anticipating the needs of our 21<sup>st</sup> Century stakeholders as the U.S. Marine Hospital Service addressed the needs of the 19<sup>th</sup> Century, and the Taft and Hamilton labs responded to those of the 20<sup>th</sup> Century. We look forward to keeping you informed, and to soliciting your ideas, as we move forward into our third century as part of the Cincinnati community.

## **NIOSH Team Offers Control Banding Training to Chilean Colleagues**

On September 9-17, a five-member NIOSH interdivisional team traveled to Santiago, Chile, to provide training and technical assistance to the Occupational Health Department, Instituto de Salud Publica de Chile (ISP) [Chile Public Health Institute] and the Ministerio del Salud de Chile [Chile Ministry of Health] as part of the NIOSH 2006-2007 Program for Elimination of Silicosis in the Americas.

The team presented a 3-day course and included live translation during the two classroom days and one field visit day to a quartz quarry and rock crushing plant. Attendees learned about strategies for assessing and controlling exposures to silica-containing dust in mines and other high-risk workplaces. On following days, the team participated in joint field site visits with ISP to a large underground and surface copper mine in the Andes and a rock crushing small enterprise in the Santiago region.

Marilyn Fingerhut, NIOSH International Coordinator, signed a letter of agreement on behalf of NIOSH Director John Howard, MD for cooperation on silicosis elimination with the Directors of ISP, the Chilean Ministry of Health, and PAHO-Chile. Plans are being made for continued collaboration during 2007. The NIOSH team included Aaron Sussell, Faye Rice, Leo Blade, Jay Colinet and Andrew Cecala.

## **NIOSH Expands WTC Topic Page, Includes New HHS Link**

NIOSH has expanded its Web topic page on information related to the NIOSH response to the World Trade Center terrorist attack of September 11, 2001. The topic page includes a link to a new U.S. Department of Health and Human Services (HHS) Web site for information about HHS World Trade Center Health Resources. This site serves as a central resource for responders, volunteers, their families, health care professionals, and others seeking information about



health effects resulting from the September 11, 2001, attacks on the World Trade Center. The site includes information and addresses for medical monitoring and treatment programs for responders, resources for health professionals who serve the exposed populations, and links to published scientific reports about health effects associated with the WTC exposures. The NIOSH page also includes a draft technical document for standardizing postmortem examinations of individuals dying after environmental exposures at the World Trade Center. The draft document is currently undergoing scientific review and is a work in progress. The NIOSH topic page can be found at http://www.cdc.gov/niosh/topics/wtc.

## **Benefits of Natural Compounds in Fighting Cancer Studied**

NIOSH scientists and colleagues are exploring the potential for a natural compound found in blackberries and other food products to offer a means for preventing and treating certain types of cancers. Results of laboratory tests reported in a recent peer-reviewed scientific article found that the compound, <a href="mailto:cyanidin-3-glucoside">cyanidin-3-glucoside</a>, inhibited and blocked processes in genes and cells that promote tumors. <a href="http://www.jbc.org/cgi/content/abstract/281/25/17359?maxtoshow=&HITS=10&hits=10&RESULTFO">http://www.jbc.org/cgi/content/abstract/281/25/17359?maxtoshow=&HITS=10&hits=10&RESULTFO</a>
RMAT=&author1=min+ding&fulltext=blackberries&andorexactfulltext=and&searchid=1&FIRSTINDE
X=0&sortspec=relevance&resourcetype=HWCITIs.

Further research is planned to follow up on those results, provide more information needed to better predict whether similar results would be seen for inhibiting or shrinking tumors in humans, and explore potential commercial applications. Additional information is available on the web from the U.S. Agricultural Research Service, which collaborated with NIOSH on the reported research. <a href="http://www.ars.usda.gov/is/pr/2006/060920.htm">http://www.ars.usda.gov/is/pr/2006/060920.htm</a>.

## **NIOSH Director to Address National Academy of Social Insurance**

NIOSH Director John Howard, MD will speak to attendees at the *Health and Income Security for Injured Workers* seminar on October 12-13 in Washington, DC. The seminar is sponsored by the National Academy of Social Insurance. Dr. Howard is one of four speakers who will discuss preparing for catastrophes in the workplace. More information on the seminar is available <a href="http://www.nasi.org/calendar\_reg3634/calendar\_reg\_show.htm?doc\_id=395559">http://www.nasi.org/calendar\_reg3634/calendar\_reg\_show.htm?doc\_id=395559</a>.

## 7th Annual Pilot Research Project Symposium to be Held this Month

The University of Cincinnati (UC) Education and Research Center will host the 7<sup>th</sup> Annual Pilot Research Project Symposium on October 12-13 at the Kettering Laboratory on the UC campus. The symposium will feature presentations from the 2006 and 2007 Pilot Research Project Grant Program awardees. DeLon Hull, Ph.D., NIOSH Associate Director for Research and Technology Transfer, will provide a keynote address on October 12. The Program is designed to increase the research capacity of research trainees and young investigators in occupational safety and health research at UC and collaborating programs in Indiana, Kentucky and Ohio. More information on the symposium is available on the UC Web site, <a href="http://eh.uc.edu/erc/2006\_PRP\_Symposium.pdf">http://eh.uc.edu/erc/2006\_PRP\_Symposium.pdf</a>. The UC Education and Research Center is one of 16 ERCs funded by NIOSH.

## NIOSH and NSC Offer Student Scholarship to Upcoming NSC Congress and Expo

NIOSH and the National Safety Council have partnered to offer student scholarships to the 2006 National Safety Council Congress and Expo, November 6-10 in San Diego, CA. Students interested in occupational safety and health are encouraged to apply. Eight students will be selected for the scholarship, which will cover transportation and provide up to \$400 for registration and other travel related expenses. Awardees will be asked to share their experiences through short reports. Applications must be submitted to <a href="mailto:rssdept@nsc.org">rssdept@nsc.org</a> by October 15, 2006. More information on the application process can be obtained from the NSC Research and Statistical Services Group at <a href="mailto:rssdept@nsc.org">rssdept@nsc.org</a>.

## NIOSH Announces Proposed Study on Reusability of Filtering Facepiece Respirators

NIOSH is seeking products or prototypes that disinfect or sterilize infectious aerosols, such as viruses, for a new study on the reusability of filtering facepiece respirators (FFR). Researchers at the NIOSH National Personal Protective Technology Laboratory propose to study the effects of decontaminating a diverse array of FFR including NIOSH-certified N95, P100, and N95 filtering facepiece respirator/surgical mask. This project will also study the survivability of a simulant influenza virus on FFR. Details on the proposed study are available in the September 26, 2006 Federal Register Notice at <a href="http://edocket.access.gpo.gov/2006/E6-15706.htm">http://edocket.access.gpo.gov/2006/E6-15706.htm</a>.



#### 2006 Federal Women of the Year

Four employees at the NIOSH Pittsburgh research facilities have been honored as the 2006 Women of the Year by the Pittsburgh Federal Executive Board. Millie Miller, Program Analyst; Angie Shepherd, General Engineer; and Maryann D'Alessandro, Associate Director of Science, from the NIOSH National Personal Protective Technology Laboratory, and Suzanne Wargo, Program Support Assistant from the Office of Administrative and Management Services, were recognized for their accomplishments and contributions to women in the Federal Government.

#### NIOSH and AIHA at the New York State Fair

NIOSH and the American Industrial Hygiene Association (AIHA) cosponsored an exhibit at the New York State Fair in Syracuse on August 24-September 4. NIOSH staff joined members of AIHA to disseminate information about both organizations. Using the theme "Detecting hazards in the workplace," the exhibit included stations representing research to address physical, biological and chemical hazards in the workplace. Over 932,000 people attended the fair over the 12 days, providing opportunity for interaction.

### **Look for Us**

Look for the NIOSH exhibit booth at these upcoming conferences.

- Association of Occupational Health Professionals, October 4-6, 2006, Sacramento, CA, Booth No. Table A
- Future Farmers of America, October 25-27, 2006, Indianapolis, IN, Booth No. H-35 in Exhibit Hall E
- National Safety Council Congress and Expo, November 6-8, 2006, San Diego, CA, Booth No. 949
- Safety WebExpo and Conference, October 4, 2006, <a href="http://www.occupationalhazards.com/safetyexpo">http://www.occupationalhazards.com/safetyexpo</a>

### r2p Corner

New NIOSH Partnership with the National Homeland Security Research Center NIOSH and the U.S. EPA Office of Research and Development recently teamed to provide their unique expertise in methods and technologies that contribute to homeland security. NIOSH researchers, providing expertise in air sampling methods, are working to update a manual of "Standardized Analytical Methods for Use During Homeland Security Events."





## **NORA Sector Council Corresponding Members**

Several of the NORA Sector Councils have begun drafting occupational safety and health research strategic plan. Those who volunteered to serve on a council but have not been contacted will be contacted very soon. Although it is not practical to invite all volunteers to serve as Council Members, we hope that all will participate as Corresponding Members. As a Corresponding Member, you will be well-informed of council activities via E-mail lists. The council will request your thoughts on the specific topics to be discussed. Some corresponding members may also be asked to serve on work groups and/or as council members in the future. If you have not already volunteered to be on a council but would like to be a Corresponding Member, please contact the NIOSH Sector Coordinator or the NORA Coordinator as listed below.

Sector Council	Contact information
Agriculture, Forestry and Fishing	NORA Coordinator NORACoordinator@cdc.gov
Construction	Matt Gillen MGillen@cdc.gov
Healthcare and Social Assistance	Teri Palermo TPalermo@cdc.gov
Manufacturing	NORA Coordinator NORACoordinator@cdc.gov
Mining	NORA Coordinator NORACoordinator@cdc.gov
Services	Dave Utterback  DUtterback@cdc.gov
Transportation, Warehousing and Utilities	Stephanie Pratt SPratt@cdc.gov
Wholesale and Retail Trade	Vern Anderson  VAnderson@cdc.gov

As always, contact the NORA Coordinator (NORACoordinator@cdc.gov), if you have any questions.

#### **News From Our Partners**

## American Welding Society to host session on new OSHA Hexavalent Chromium Regulation

The American Welding Society (AWS) will hold a free session covering the new Occupational Safety and Health Administration (OSHA) requirements pertaining to hexavalent chromium (Cr(VI)) exposure. The session, "Compliance with OSHA's Hexavalent Chromium Standard," will be held on November 1, 2006 as part of the FABTECH International and AWS Welding Show, which will run from October 31 through November 2 in Atlanta, Georgia. More information on the session and the AWS is available on their Web site, <a href="http://www.aws.org">http://www.aws.org</a>.

#### **Communication Products**

## Preventing Worker Injuries and Deaths from Mobile Crane Tip-Over, Boom Collapse, and Uncontrolled Hoisted Loads

A new NIOSH Alert, DHHS (NIOSH) Publication Number 2006-142, provides recommendations for reducing risk of work-related injury and death when working on or around mobile cranes. The Alert describes six incidents resulting in the deaths of eight workers and injuries to two workers. The Alert can be accessed at <a href="http://www.cdc.gov/niosh/docs/2006-142">http://www.cdc.gov/niosh/docs/2006-142</a>.



## **Bicycle Saddles and Reproductive Health Topic Page**

NIOSH has developed a new topic page on bicycle saddles and reproductive health. NIOSH researchers have investigated the potential health effects of prolonged bicycling on police bicycle patrol units over the past few years. Updates and published reports of these research studies are available on the topic page, <a href="http://www.cdc.gov/niosh/topics/bike">http://www.cdc.gov/niosh/topics/bike</a>.



## **Upcoming Events**

### Noise-Induced Hearing Loss in Children at Work and Play

NIOSH and partners will cosponsor *Noise-Induced Hearing Loss (NIHL)* in Children at Work and Play, October 19–20, 2006, in Cincinnati, Ohio. The conference will focus on the issue of NIHL in children who sometimes begin working as early as age 10-12 years, often in noisy environments, such as construction, agriculture, entertainment, and landscaping. Other cosponsors for the conference include the National Hearing Conservation Association, Oregon Health and Science University, the Marion Downs Hearing Center, the University of Northern Colorado, and the National Institute on Deafness and Other Communication Disorders. More information on the conference is available at <a href="http://www.http://www.http://www.hearingconservation.org/conf\_childrenconf.html">http://www.http://www.hearingconservation.org/conf\_childrenconf.html</a>.

# International Conference on Nanotechnology Occupational and Environmental Health and Safety: Research to Practice

NIOSH and the University of Cincinnati will cosponsor the *International Conference on Nanotechnology Occupational and Environmental Health and Safety: Research to Practice*, December 3-8, 2006, in Cincinnati, Ohio. For more information, visit the conference Web site at <a href="http://www.uc.edu/noehs">http://www.uc.edu/noehs</a>. The conference follows other successful international forums cosponsored by NIOSH in Buxton, U.K., in 2004, Minneapolis in 2006, and Miami earlier in 2006.

## Call for Papers: 2007 Johnson Conference: Workplace Aerosol Sampling to Meet ISO Size-Selective Criteria

Abstracts will be accepted until December 15, 2006 for the *2007 Johnson Conference: Workplace Aerosol Sampling to Meet ISO Size-Selective Criteria*. The conference will be held July 16-20, 2007 in Burlington, VT and is sponsored by ASTM International. More information on the Call for Abstracts is available by contacting Martin Harper, Conference Chairman, at <a href="MHarper@cdc.gov">MHarper@cdc.gov</a>. Additional information on the conference can be found at <a href="http://www.astm.org">http://www.astm.org</a> under *Symposia and Workshops*.

### **Word of the Month**

**Cyanidin-3-glucoside (C3G)** is a member of the anthocyanin family, the largest group of pigments present in many edible berries, dark grapes, cabbages and other pigmented foods. Anthocyanins serve as natural antioxidants, anti-inflammatory and anti-mutagenic agents. Earlier studies have shown that anthocyanins are beneficial in reducing age-associated oxidative stress, as well as in improving neuronal and cognitive brain function.

## NIOSH eNews on the Web: www.cdc.gov/niosh/enews/

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